



Description

- The roots and trunks are intertidal, with only the lowest leaves inundated by high tide.
- The width of the forest can range from one tree, to many kilometers.
- The substrate can be sand, mud, leaf litter, or peat, often as a veneer over bedrock.
- Wrack accumulations can be very heavy.
- They are highly productive, serve as nursery habitat, and support a great diversity and abundance of animal and plant species.

Predicted Oil Behavior

- Oil can wash through mangroves if oil comes ashore at high tide.
- If there is a berm or shoreline present, oil tends to concentrate and penetrate into the berm sediments or accumulated wrack/litter.
- Heavy and emulsified oil can be trapped in thickets of red mangrove prop roots.
- Oil readily adheres to prop roots, tree trunks, and pneumatophores.
- Reoiling from resuspended or released oil residues may cause additional injury over time.
- Oiled trees start to show evidence of effects (leaf yellowing) weeks after oiling; tree mortality may take months, especially for heavy oils.

Response Considerations

- Oiled wrack can be removed once the threat of oiling has passed. Wrack can actually protect the trees from direct oil contact.
- Sorbent boom can be placed in front of oiled forests to recover oil released naturally.
- In most cases, no other cleanup activities are recommended.
- Where thick oil accumulations are not being naturally removed, low-pressure flushing or vacuum may be attempted at the outer fringe.
- No attempt should be made to clean interior mangroves, except where access to the oil is possible from terrestrial areas.
- It is extremely important to prevent disturbance of the substrate by foot traffic; thus most activities should be conducted from boats.

INTERTIDAL

Mangroves

Response Method	Oil Category				
	I	II	III	IV	V
Oil Category Descriptions					
I – Gasoline products					
II – Diesel-like products and light crudes					
III – Medium grade crudes and intermediate products					
IV – Heavy crudes and residual products					
V – Non-floating oil products					
The following categories are used to compare the relative environmental impact of each response method in the specific environment and habitat for each oil type. The codes in each table mean:					
A = The least adverse habitat impact.					
B = Some adverse habitat impact.					
C = Significant adverse habitat impact.					
D = The most adverse habitat impact.					
I = Insufficient information - impact or effectiveness of the method could not be evaluated.					
— = Not applicable.					
Natural Recovery	A	A	A	A	A
Barriers/Berms	B	B	B	B	B
Manual Oil Removal/Cleaning	—	D	C	C	C
Mechanical Oil Removal	—	—	—	—	—
Sorbents	—	A	A	A	B
Vacuum	—	B	B	B	B
Debris Removal	—	A	A	A	A
Sediment Reworking/Tilling	—	—	—	—	—
Vegetation Cutting/Removal	—	—	—	—	—
Flooding (deluge)	—	B	B	B	B
Low-pressure, Ambient Water Flushing	—	B	C	C	C
High-pressure, Ambient Water Flushing	—	—	—	—	—
Low-pressure, Hot Water Flushing	—	—	—	—	—
High-pressure, Hot Water Flushing	—	—	—	—	—
Steam Cleaning	—	—	—	—	—
Sand Blasting	—	—	—	—	—
Solidifiers	—	C	C	—	—
Shoreline Cleaning Agents	—	—	I	I	I
Nutrient Enrichment	—	I	I	I	I
Natural Microbe Seeding	—	I	I	I	I
In-situ Burning	—	—	—	—	—

Consult the *Environmental Considerations for Marine Oil Spill Response* document referenced on page 5 before using this table.